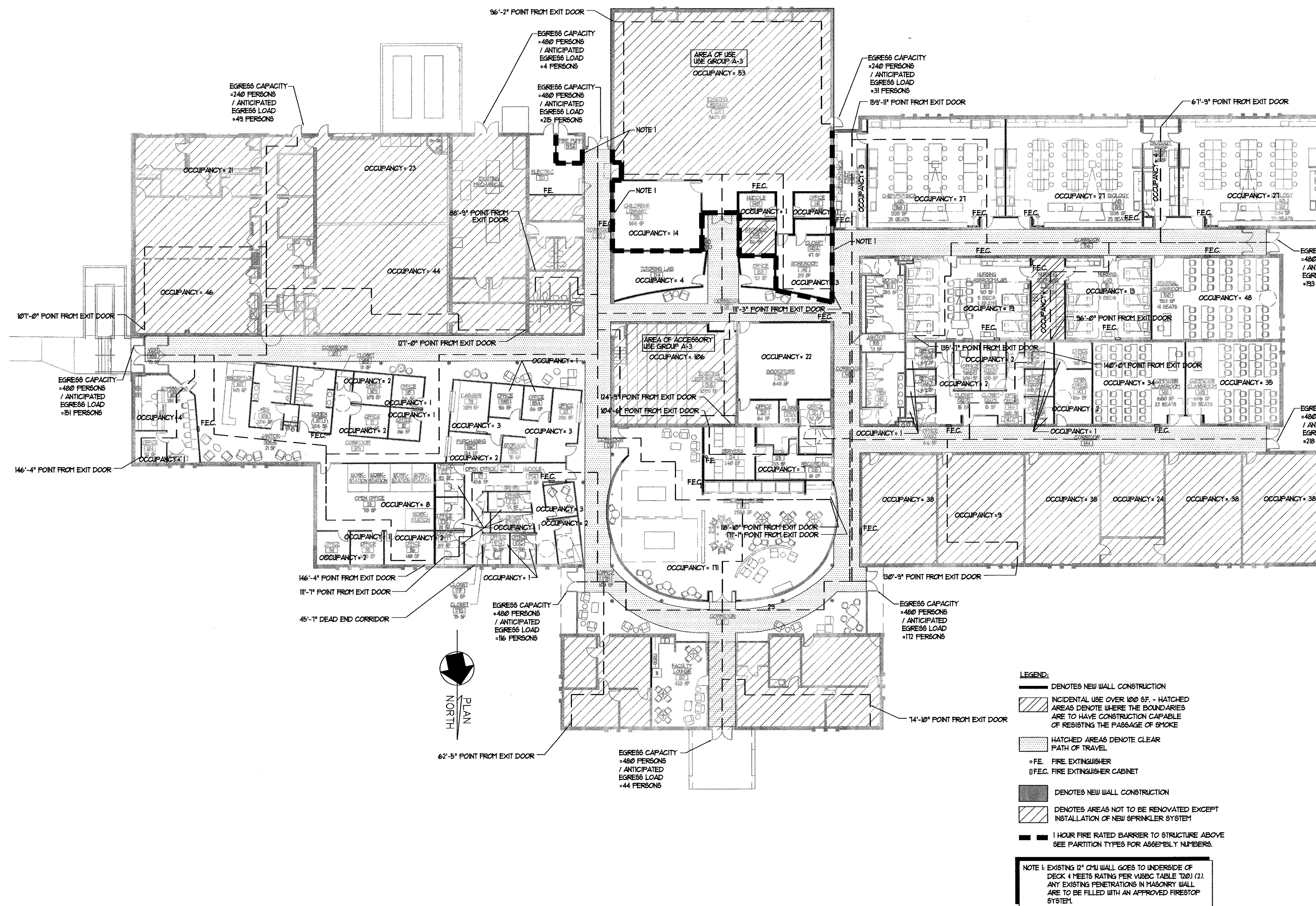




EXISTING FACILITY BUILDING CODE

VIRGINIA FIRE SAFETY REGULATIONS
- LATE 1960'S

BUILDING CODES

2006 VUSBC
REFERENCING: 2006 INTERNATIONAL BUILDING CODE
2006 INTERNATIONAL PLUMBING CODE
2006 INTERNATIONAL MECHANICAL CODE
2005 NATIONAL ELECTRICAL CODE
2006 INTERNATIONAL FUEL GAS CODE
2006 INTERNATIONAL ENERGY CONSERVATION CODE
2006 INTERNATIONAL FIRE CODE

ACCESSIBILITY STANDARD:

ADAMS - JULY 23, 2004
- EXEMPT FROM ADA (PAGES 72 TO 140)

TYPE OF CONSTRUCTION

TYPE - II B
FULLY SPRINKLERED PER VUSBC 903.3.1.1

OCCUPANCY CLASSIFICATION

MIXED SEPARATED
GROUP B (BUSINESS) / GROUP A-3 (ASSEMBLY)
W/ ACCESSORY USE GROUP A-3 (3637 S.F. - LESS THAN 10% AREA)
GROUP A-3 (ASSEMBLY)

BUILDING USE

HIGHER EDUCATION / LIBRARY

ALLOWABLE HEIGHT (TABLE 503 + 504.2)

ALLOWABLE HEIGHT 2 STORIES / 55 FT.
SPRINKLER ADJUSTMENTS +1 STORY / 20 FT.
TOTAL ALLOWABLE 3 STORIES / 75 FT.

ACTUAL: 1 STORY & 19'-9"

ALLOWABLE AREA (TABLE 503 + 506)

TABULAR AREA = 23,000 SQ. FT.
 $I_a = \frac{1,425 - 0.25}{30} = .75$
 $I_a = 3$
 $A_a = 23,000 + [(23,000)(.75)] + [(23,000)(3)] = 109,250$ SQ. FT.

GROUP A-3 OCCUPANCY

TABULAR AREA = 9,500 SQ. FT.

$I_a = \frac{1,425 - 0.25}{30} = .75$

$I_a = 3$

$A_a = 9,500 + [(9,500)(.75)] + [(9,500)(3)] = 45,125$ SQ. FT.

SEPARATED OCCUPANCIES ALLOWABLE AREA RATIO

$\frac{47,857}{109,250} = .44$
 $\frac{5,128}{45,125} = .12$
 $.44 + .12 = .56 \leq 1$

BUILDING AREA

TYPE B OCCUPANCY 47,857 SQ. FT.

TYPE A-3 OCCUPANCY 5,128 SQ. FT.

GROUND FLOOR 52,985 SQ. FT.

EMERGENCY SHELTER

THIS BUILDING IS NOT DESIGNATED AS AN EMERGENCY SHELTER

SEISMIC DESIGN CATEGORY

EXISTING BUILDING = NOT APPLICABLE
NEW CONSTRUCTION = SEISMIC DESIGN CATEGORY "B"

CODE DATA

OCCUPANCY LOAD (TABLE 1004.1.1)

SEPARATED B USE GROUP

BUSINESS = $\frac{28,964 \text{ GROSS SQ. FT.}}{100 \text{ GROSS SQ. FT. PER OCCUPANT}} = 290$ OCCUPANTS
EDUCATIONAL = $\frac{9,474 \text{ GROSS SQ. FT.}}{20 \text{ NET SQ. FT. PER OCCUPANT}} = 474$ OCCUPANTS (CLASSROOM)
EDUCATIONAL = $\frac{5,587 \text{ GROSS SQ. FT.}}{50 \text{ NET SQ. FT. PER OCCUPANT}} = 112$ OCCUPANTS (VOCATIONAL)
MERCANTILE = $\frac{654 \text{ GROSS SQ. FT.}}{30 \text{ GROSS SQ. FT. PER OCCUPANT}} = 22$ OCCUPANTS
STORAGE/MECH. = $\frac{2,335 \text{ GROSS SQ. FT.}}{300 \text{ GROSS SQ. FT. PER OCCUPANT}} = 8$ OCCUPANTS

ACCESSORY A-3 USE GROUP

A-3 = $\frac{1,089 \text{ GROSS SQ. FT.}}{50 \text{ NET SQ. FT. PER OCCUPANT}} = 73$ OCCUPANTS (LECTURE)
A-3 = $\frac{2,278 \text{ GROSS SQ. FT.}}{50 \text{ GROSS SQ. FT. PER OCCUPANT}} = 23$ OCCUPANTS (LIBRARY STACK)
BUSINESS = $\frac{698 \text{ GROSS SQ. FT.}}{100 \text{ GROSS SQ. FT. PER OCCUPANT}} = 7$ OCCUPANTS

SEPARATED A-3 USE GROUP

A-3 = $\frac{1,089 \text{ GROSS SQ. FT.}}{50 \text{ NET SQ. FT. PER OCCUPANT}} = 73$ OCCUPANTS (LIBRARY READING)
A-3 = $\frac{2,278 \text{ GROSS SQ. FT.}}{50 \text{ GROSS SQ. FT. PER OCCUPANT}} = 23$ OCCUPANTS (LIBRARY STACK)
BUSINESS = $\frac{698 \text{ GROSS SQ. FT.}}{100 \text{ GROSS SQ. FT. PER OCCUPANT}} = 7$ OCCUPANTS

TOTAL OCCUPANT LOAD = 1,154 OCCUPANTS

FIRE RESISTANCE RATING (TABLES 601 + 508.3)

STRUCTURAL FRAME - 0 HR.
EXTERIOR BEARING WALLS - 0 HR.
INTERIOR BEARING WALLS - 0 HR.
INTR. BEARING WALLS (ROOF ONLY) - 0 HR.
NON-BEARING WALLS & PART. - 0 HR.
FLOOR CONSTRUCTION - 0 HR.
ROOF CONSTRUCTION - 0 HR.
CORRIDOR WALLS - 0 HR.
STORAGE OVER 100 SF - 0 HR.
SEPARATION (A + B) - 1 HR.

PLUMBING FIXTURE COUNT

USE AND OCCUPANCY UNCHANGED FROM ORIGINAL CONSTRUCTION

WATER CLOSETS

	MEN	WOMEN
ORIGINAL BUILDING	11 (7 UR.)	10
NEW DESIGN	11 (4 UR.)	11 + 1 UNSEX

LAVATORIES

	MEN	WOMEN
ORIGINAL BUILDING	8	9
NEW DESIGN	9	9 + 1 UNSEX

DRINKING FOUNTAIN

	TOTAL
ORIGINAL BUILDING	6
NEW DESIGN	8

SERVICE SINK

	TOTAL
ORIGINAL BUILDING	2
NEW DESIGN	2

ETEWASH / EMERGENCY SHOWER

	TOTAL REQUIRED=	TOTAL PROVIDED=
	5	5